

# Law of the Colorado River



House Rural Affairs & Agriculture Committee  
Senate Agriculture & Natural Resources Committee  
January 9, 2020

# The Colorado River Basin



# Law of the Colorado River

**Colorado River Compact (1922)**

**Boulder Canyon Project Act (1928)**

**Mexican Water Treaty (1944)**

**Upper Colorado River Basin Compact (1948)**

**Colorado River Storage Project Act (1956)**

*Arizona v. California (1963)*

**Colorado River Basin Project Act (1968)**

# Colorado River Compact (1922)



## Article III(a)

Apportions to Upper Basin and Lower Basin 7.5 million acre-feet per year in perpetuity.

## Article III(b)

Lower Basin may develop additional one million acre-feet annually.

## Article III(c)

Defines obligations of Upper and Lower Basins for deliveries to Mexico.

## Article III(d)

Upper Division will not deplete flows at Lee Ferry below an aggregate of 75 million acre-feet over any period of ten consecutive years.

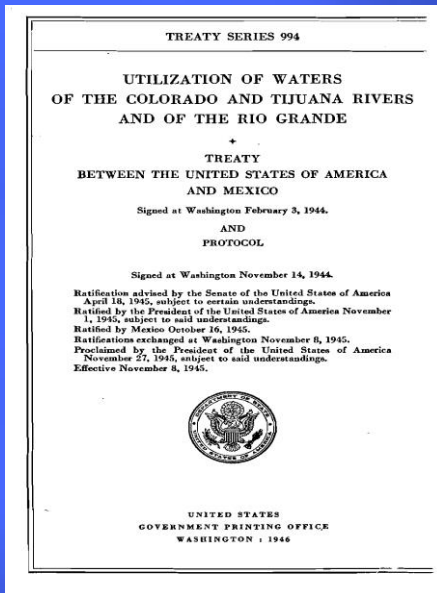
## Article IV(c)

No interference with state control of water within its boundaries.

## Article VIII

Present perfected rights are unimpaired.

# Mexican Water Treaty (1944)



## Article 10(a)

1.5 maf guaranteed to Mexico annually

## Article 10(b)

“surplus of waters” and  
“extraordinary drought” provisions

## Minute 319 (2012)

- Mexico agrees to share shortages
- Storage of Mexican water in Lake Mead
- Environmental Release (pulse flow)



## Extended by Minute 323 (2017)

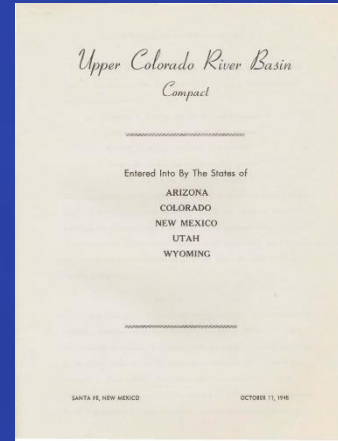
In effect until December 31, 2025



# Upper Colorado River Basin Compact (1948)

## Article I

“equitable division and apportionment of the use of waters”



## Article III(a)

- Arizona 50,000 acre feet
- **Colorado 51.75%**
- Utah 23.00%
- Wyoming 14.00%
- New Mexico 11.25%

## Article VIII

Creates Upper Colorado River Commission (four states plus United States)

## Article IV

In the event of curtailment  
Commission determines quantities

Overuse penalty

# Colorado River Storage Project Act (1956)

Navajo Reservoir



Flaming Gorge  
Reservoir



Aspinall Unit  
(Blue Mesa Reservoir)



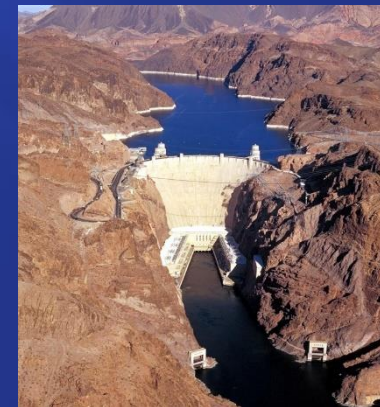
30.6 million acre-feet  
total storage



Objective Minimum Annual  
Release:  
8.23 million acre-feet



Lake Powell



Lake Mead

# Colorado River Basin Project Act (1968)

- Authorized construction of Central Arizona Project (CAP)
- Directed Secretary of Interior to propose long range operating criteria (LROC) for coordinated operation of Lake Powell and Lake Mead
  - Releases from Lake Powell in the following priority:
    - One-half the deficiency described in Article III(c) (Mexican delivery obligation)
    - Upper Division obligation under Article III(d) (75/10 – 7.5 maf per year)

## 1970 Long Range Operating Criteria (LROC)

- 8.23 maf minimum objective release from Lake Powell
- Maintain equal storage in Lake Powell and Lake Mead



# Adapting the Law of the River

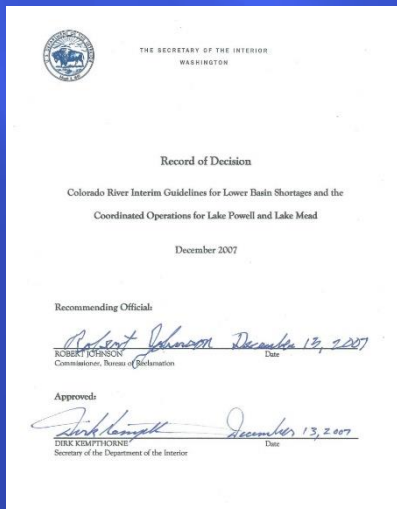
## Sustained Drought

Lake Powell  
1999-2005



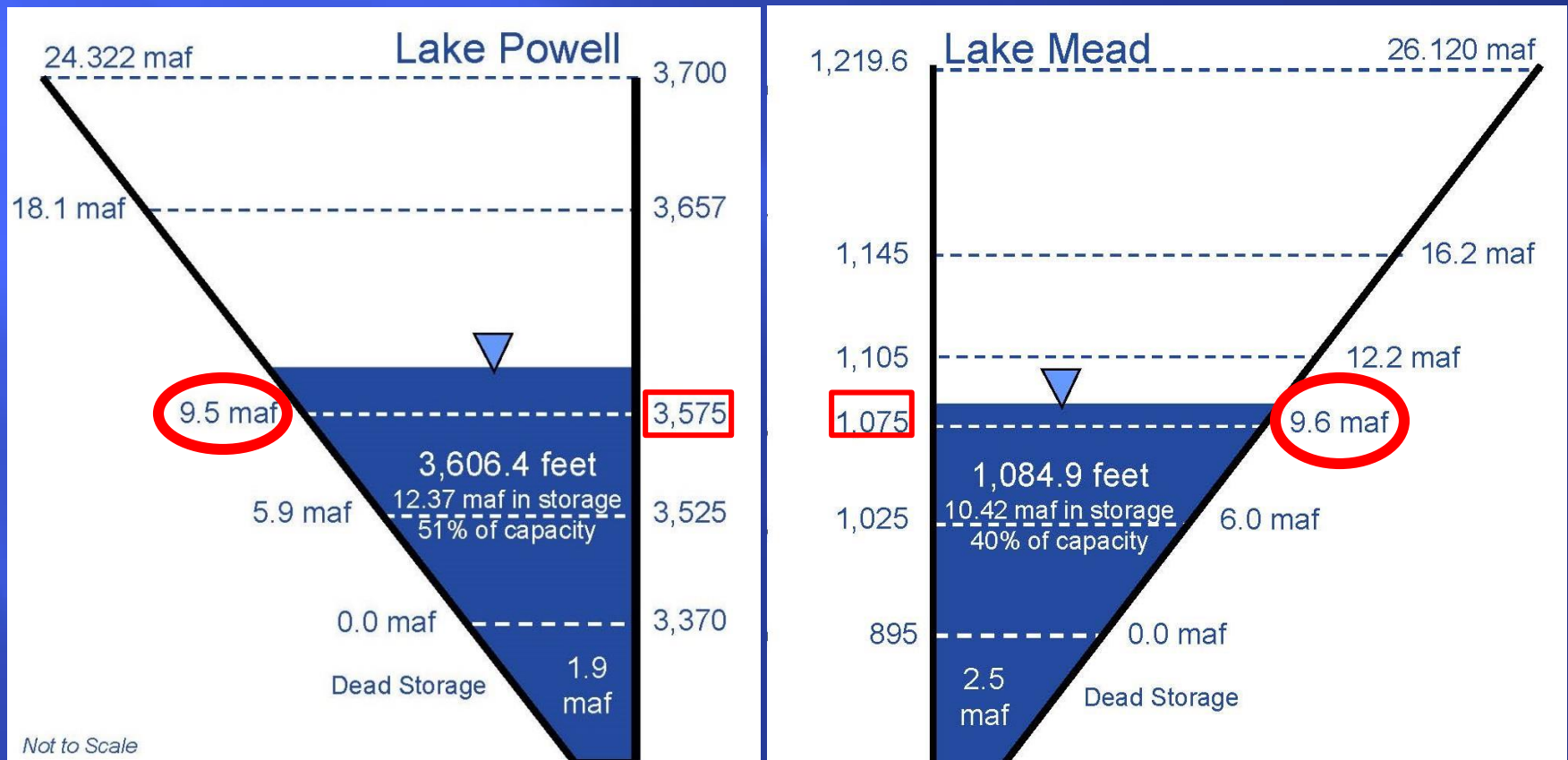
## Interim Shortage Guidelines (2007)

- Balancing tiers for coordinated operation of Lake Powell and Lake Mead
- Conditions under which the Secretary of the Interior will declare shortage and surplus in the Lower Basin
- Expire December 31, 2025



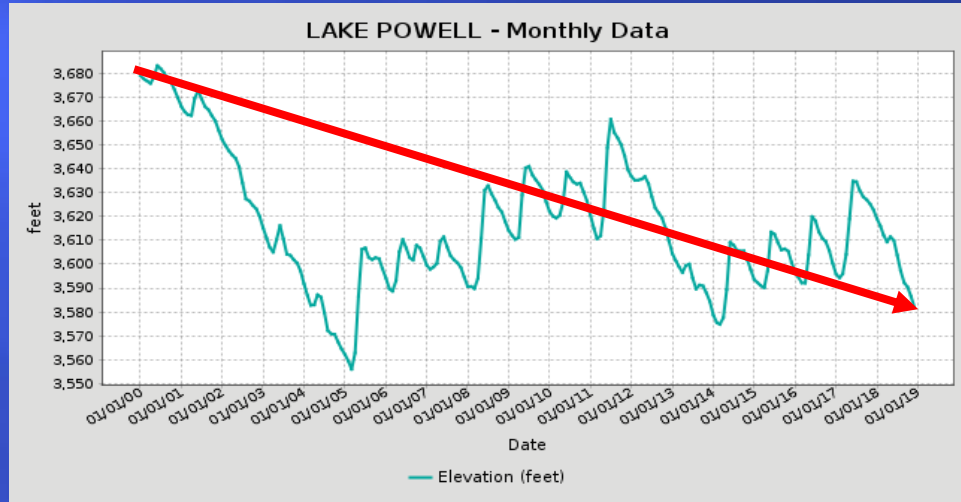
# Adapting the Law of the River

## 2007 Interim Shortage Guidelines - Operating Tiers



# Sustained Drought Continues

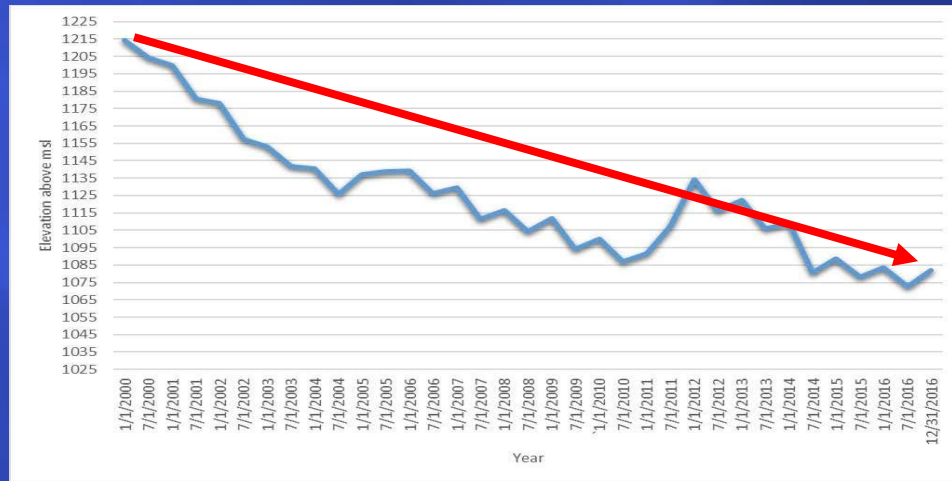
Lake Powell  
storage  
elevation  
2000-2018



Critical Storage  
Elevations

3525  
to protect  
Minimum  
Power  
Pool

Lake Mead  
storage  
elevation  
2000-2016



1075  
Shortage  
Condition

# Adapting the Law of the River

## Drought Contingency Planning (2019-2026)

### Lower Basin States Drought Contingency Plan

- All States take increased shortages as Lake Mead storage declines
- Reclamation to create or conserve 100,000 of Colorado System water annually
- Increased flexibility for uses and withdrawals of Intentionally Created Surplus

# Adapting the Law of the River

## Lower Basin Reductions 2007 Interim Guidelines Shortages + DCP Reductions

| Lake Mead<br>Elevation (ft) | 2007 Interim Guidelines<br>Shortages (kaf) |    | Voluntary Reductions (kaf) |    |     | Combined Reductions (kaf)<br>(2007 Interim Guidelines Shortages + Voluntary<br>Reductions) |    |     |       |
|-----------------------------|--|----|----------------------------|----|-----|--|----|-----|-------|
|                             | AZ   | NV | AZ                         | NV | CA  | AZ   | NV | CA  | TOTAL |
| 1,090                       | 0  | 0  | 192                        | 8  | 0   | 192  | 8  | 0   | 200   |
| 1,085                       | 0  | 0  | 192                        | 8  | 0   | 192  | 8  | 0   | 200   |
| 1,080                       | 0  | 0  | 192                        | 8  | 0   | 192  | 8  | 0   | 200   |
| 1,075                       | 320  | 13 | 192                        | 8  | 0   | 512  | 21 | 0   | 533   |
| 1,070                       | 320  | 13 | 192                        | 8  | 0   | 512  | 21 | 0   | 533   |
| 1,065                       | 320  | 13 | 192                        | 8  | 0   | 512  | 21 | 0   | 533   |
| 1,060                       | 320  | 13 | 192                        | 8  | 0   | 512  | 21 | 0   | 533   |
| 1,055                       | 320  | 13 | 192                        | 8  | 0   | 512  | 21 | 0   | 533   |
| 1,050                       | 400  | 17 | 192                        | 8  | 0   | 592  | 25 | 0   | 617   |
| 1,045                       | 400  | 17 | 240                        | 10 | 200 | 640  | 27 | 200 | 867   |
| 1,040                       | 400  | 17 | 240                        | 10 | 250 | 640  | 27 | 250 | 917   |
| 1,035                       | 400  | 17 | 240                        | 10 | 300 | 640  | 27 | 300 | 967   |
| 1,030                       | 400  | 17 | 240                        | 10 | 350 | 640  | 27 | 350 | 1,017 |
| < 1,025                     | 480  | 20 | 240                        | 10 | 350 | 720  | 30 | 350 | 1,100 |

Add Mexico's reductions under Minute 323 and Binational Agreement: Total = 1,375 kaf



# Adapting the Law of the River

## Drought Contingency Planning (2019-2026)

### Upper Basin States Drought Contingency Plan

Goals: Reduce or eliminate probability of Lake Powell reaching minimum power pool through 2026; create demand management pool to assure Compact compliance.

#### Elements:

- Weather Modification
- Drought Response Operations for upstream CRSP reservoirs
- Demand Management

# Adapting the Law of the River

## Upper Basin States Drought Contingency Plan

### Demand Management Program

Colorado Water Conservation Board – public outreach

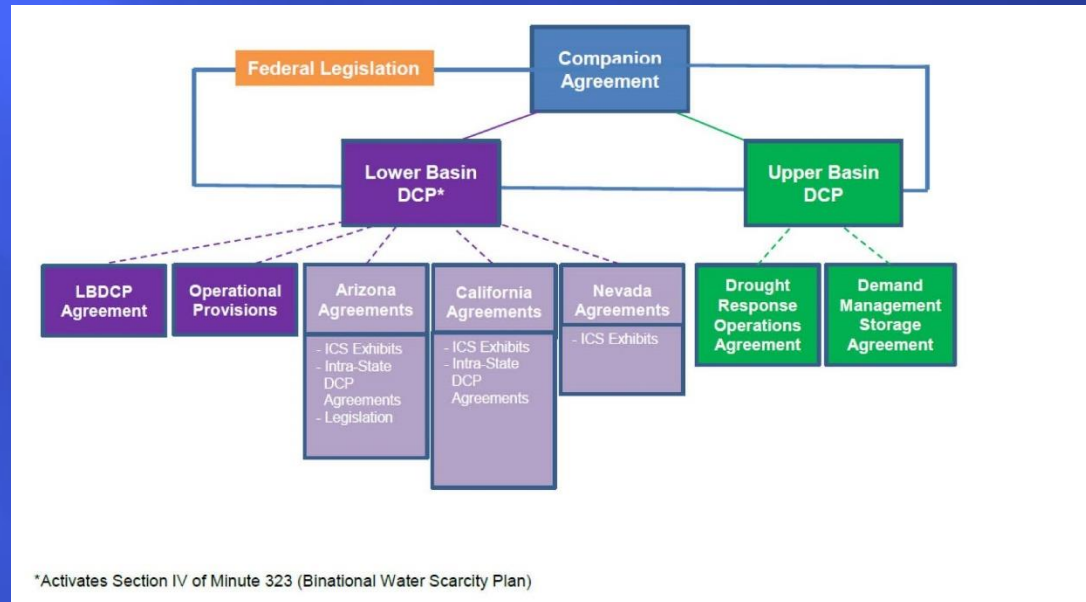
Goal: Evaluate alternatives to facilitate temporary, voluntary, compensated reductions in consumptive use through willing participant arrangements.

Challenges: Working within the prior appropriation system, sources of funding, equitable distribution of reductions state wide, four states must agree.

Issues yet to be Resolved: Accounting, implementation, management, shepherding and administration.

# Adapting the Law of the River

## Colorado River Basin Drought Contingency Plan



Federal Legislation passed April, 2019

DCP Documentation signed May, 2019

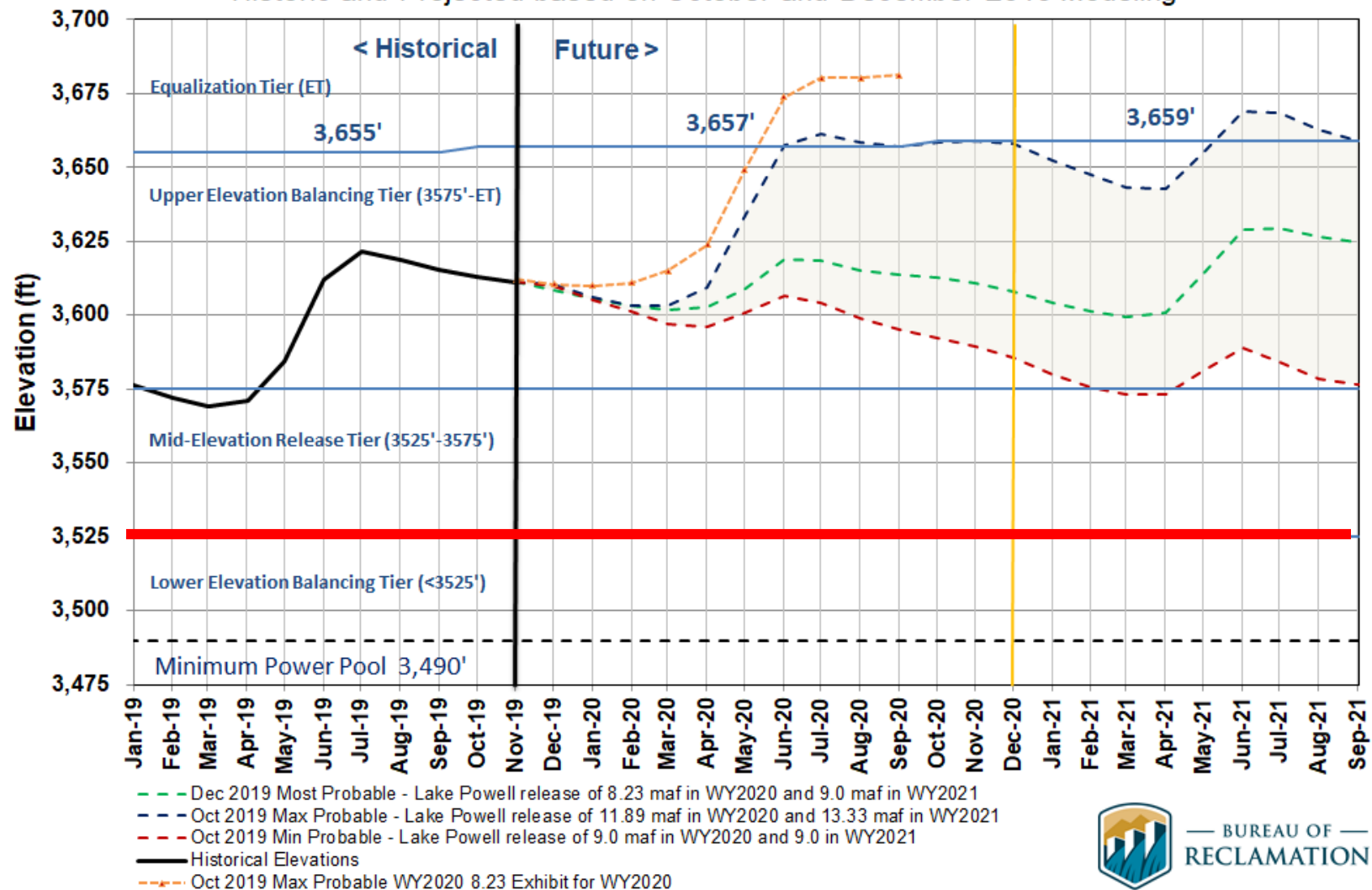
Drought Contingency Plan is not a permanent solution – expires December 31, 2025 (2026 AOP).

DCP is a temporary adjustment to reservoir operations while the states and U.S. evaluate the effectiveness of 2007 Interim Guidelines and agree on any revisions needed.

# Short Term Future Projections

## Lake Powell End of Month Elevations

Historic and Projected based on October and December 2019 Modeling

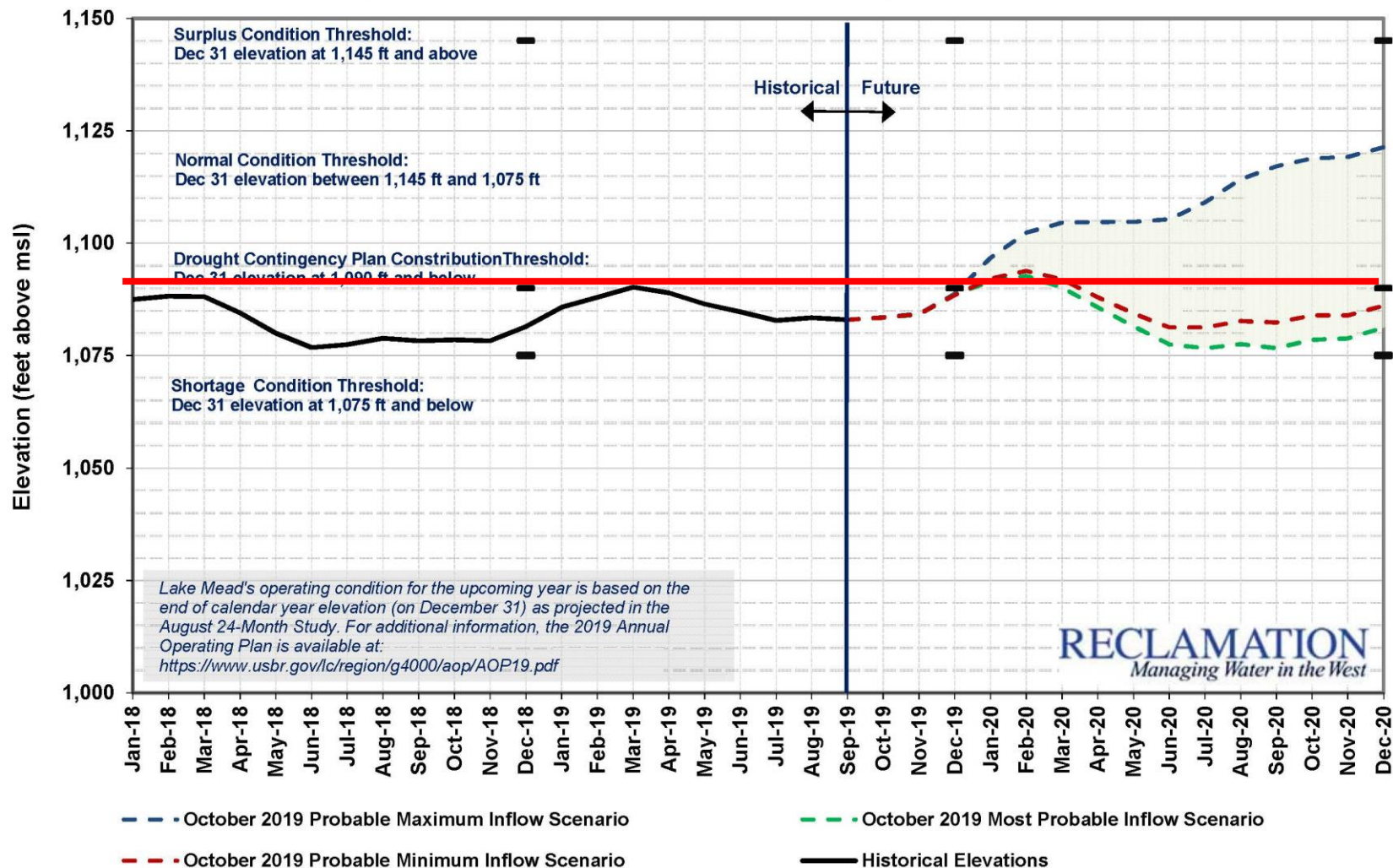


BUREAU OF  
RECLAMATION

# Short Term Future Projections

## Lake Mead End of Month Elevations

Projections from the October 2019 24-Month Study Inflow Scenarios





# QUESTIONS?

